

Subscription Manager

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PDPS Roadmap



Special Topic: Production Rules

Capture PGE Profile at **SSI&T**

Describe Production Goals through **Production Requests**

Accept **On-demand** Production Requests

Accept Resource Reservations and Create **Resource Plans**

Planning Production Controls - Create and Activate **Production Plans**

Coordinate Production from Data Arrival with Subscription Notifications

Handle L0 **Data Preparation**

Special Topic: Production Subsetting

Realtime **Production** Controls and PGE Execution Monitoring

Special Topic: PGE Exit Handling

Quality Assurance Check Output Products

Special Topic: PDPS Database

Special Topic: Ancillary Data Pre-Processing



Design Drivers

General Functional Description

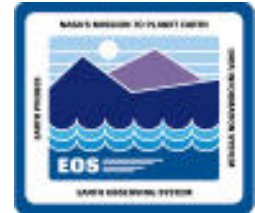
- **Manage receipt of subscription notifications**
- **Release jobs to the processing subsystem when input data requirements have been satisfied.**

New Release B Features

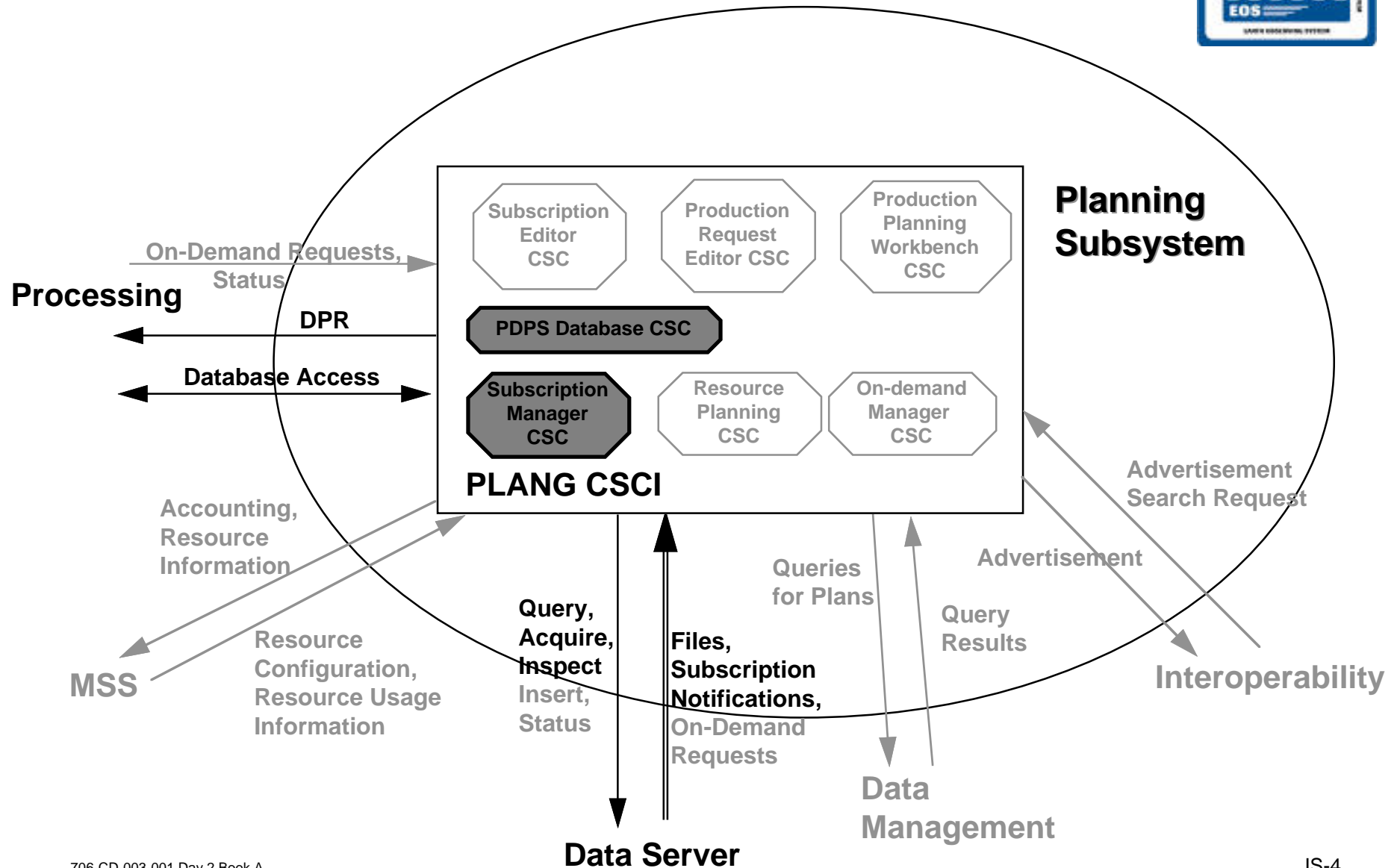
- **Receive Planning Data Availability Schedule notices from other sites**
- **Receive Detailed Activity Schedules from FOS**
- **Create Data Availability Times Schedules**
 - **Create DAT from FOS schedule**
 - **Create DAT from Planning Data Availability Schedule**
- **Build Instrument Mode Schedules**
- **Handle new Production Rules**

Evolutionary Features

- **Easily extensible for handling new production rules**

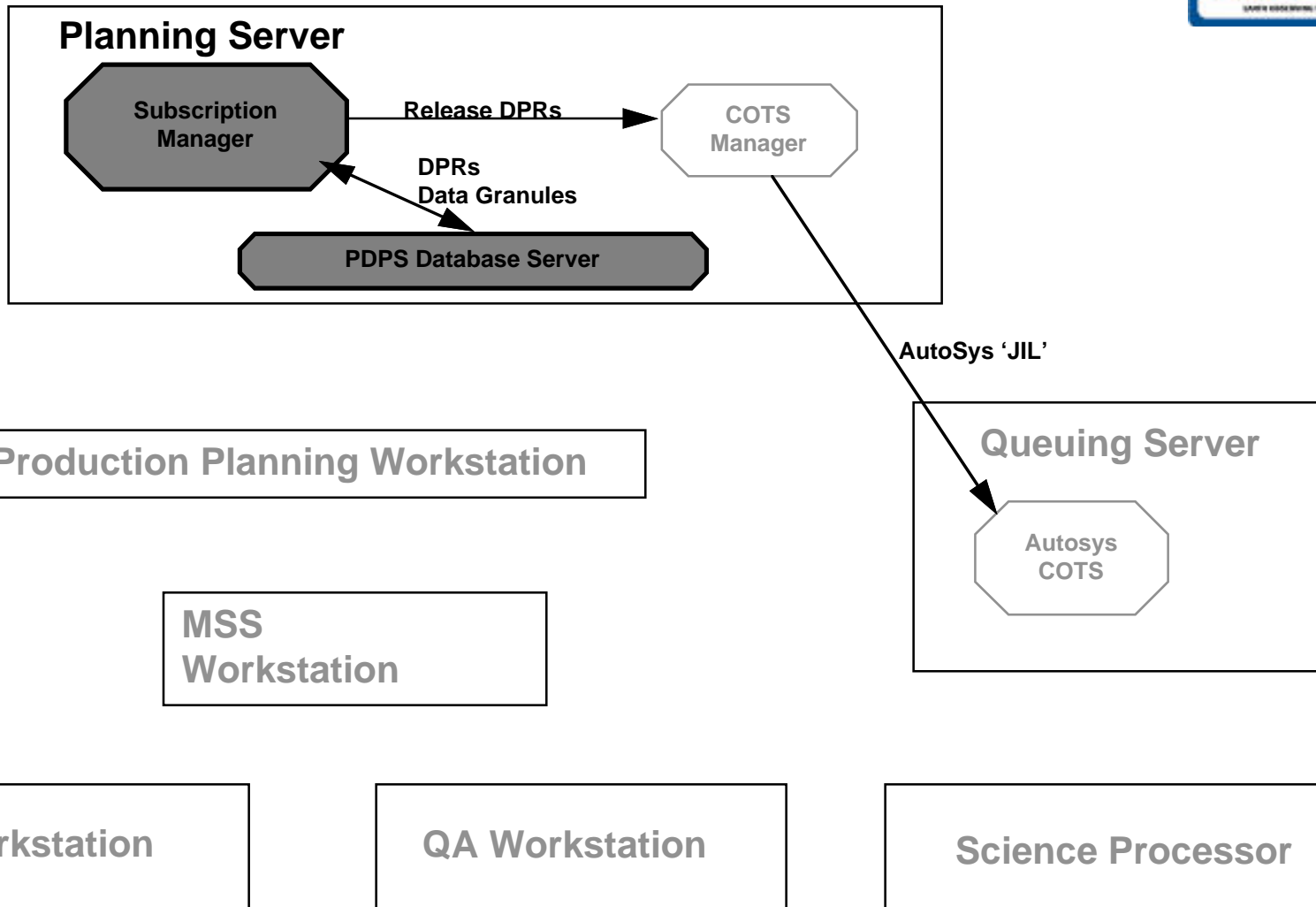


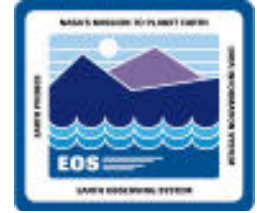
Software Architecture Overview





HW/SW Architecture





Public Interfaces/Key Mechanisms

Data Server Interface

- **Subscription Notifications**
- **Inspect obtains the metadata of the specified data type**
- **Queries to get ESDTReference Collector of data**
- **Acquires to obtain Detailed Activity Schedules from FOS and Planning Data Availability Schedules from other DAACs**

Data Processing Subsystem

- **Releases jobs to be processed**

Key Mechanisms

- **Process Framework**
- **Universal Reference**
- **Subscription Server**

Subscription Manager



Object Model:

- Subscription Manager

305-CD-026-002 4.2.10

Event Traces:

- Subscription Notifications Scenario

305-CD-026-002 4.4.13

- This scenario describes the procedure by which the subscription manager is informed of data arrival and the actions performed based on this notification.

- Subscription Notification with Spatial Based Input Scenario 305-CD-026-002 4.4.14

- This scenario describes the processing of notifications of data types that are geographical tiles instead of time continuous data.

- Subscription Notification with Alternate Inputs Scenario

305-CD-026-002 4.4.15

- This scenario describes the process involved when a notification is received, not all dependencies have been satisfied and alternate inputs are specified for the processing request.

- Limited Automatic Replan Based on PDAS or FOS DAS

305-CD-026-002 4.4.17

- This scenario describes how a limited automatic replan is initiated by the receipt of a new FOS Detailed Activity Schedule or Planning Data Availability Schedule.

Subscription Manager (cont.)



PDL:

- **EcUTStatus PISubMsgCb::HandleCbMsg(Message, MessageClass, MessageLength, MessageId, ReplyMessageId, SenderName)** 305-CD-026-002 4.3.109
 - This function handles the call back chores.
- **EcTBoolean PIDPRB::CheckAvailability()** 305-CD-026-002 4.3.34
 - This operation checks to see if all the data dependencies for a Data Processing Request have been fulfilled.
- **EcTBoolean PIDASDifferent::CheckReplan(PIDataAvailabilityTimes & newdat, PIDataAvailabilityTimes & olddat)** 305-CD-026-002 4.3.30
 - Compare the data availability times from a new Planning Data Availability Schedule (PDAS) or FOS Detailed Activity Schedule (FOS DAS) with the previous version to see if any data granules expected within myTimeFrame are now predicted to come myDelta later than expected.



Data Availability Times

Object Model

- Data Availability Times 305-CD-026-002 4.2.11

Event Traces

- Data Availability Times Schedule 305-CD-026-002 4.4.16
 - This scenario describes the construction of a Data Availability Times Schedule by the Planning Subsystem from within the subscription manager.

PDL:

- EcUtStatus PIDataAvailabilityTimes::MakeDATFromFOSDASFile(RWTVaISlist<PIFOSDASFile>) 305-CD-026-002 4.3.36
 - This method will create a Data Availability Times Schedule from a PIFOSDASFile received from the Data Server.
- RWTime PIDataTransferHistory::CalculateMyMovingAverage(RWCString:myDataTypeld) 305-CD-026-002 4.3.43
 - This method will calculate the moving average of the EDOS/DAAC receipt time of a data type until its availability.

Summary



New Release B Features

- **Receive Planning Data Availability Schedule Notices from Other Sites**
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